

12th July, 1960.COCOM Document 3715.44/8COORDINATING COMMITTEERECORD OF DISCUSSIONONTHE INTERPRETATION OF ITEMS 1544 AND 15607th and 11th July 1960

Present: Belgium(Luxembourg), Canada, France, Germany, Italy, Japan, Netherlands, United Kingdom, United States.

References: COCOM Documents 3715.44/4, 5, 6, 7 and 3715.60/1.

1. The CHAIRMAN recalled the discussions which had already taken place and drew the Committee's attention in particular to paragraph 12 of COCOM Document 3715.44/7 which listed the three points to be studied at that day's meeting. He noted that, at the Committee's request, a group of experts had already discussed these matters and called upon their spokesman, the Netherlands expert, to report on their findings.
2. The NETHERLANDS expert explained that he would now summarise the exchanges which had just taken place between experts and would provide full details in a report annexed to the present document. The Group of experts had addressed itself mainly to Item 1560, and had based its study on the points listed in paragraph 12 of COCOM Document 3715.44/7 and on papers submitted by the United Kingdom and Netherlands experts. (See Annexes 2 and 3 hereto). A certain measure of agreement had been reached, though certain delegations wished to refer back to their Governments before taking up a position. In general, it was felt that the insertion of the phrase "not elsewhere specified" after the words "electronic components" in the definition of Item 1560 would be most useful. It would mean that all components mentioned elsewhere in the Electronics Category would be viewed against the criteria of the specific item concerned and not against those of Item 1560. Speaking personally, the United States expert believed that insertion of the words "n.e.s." in Item 1560 would be useful, although he would wish to consult with his authorities. He emphasised, however, that such an insertion should be made only after careful study, as it might prove that definitions of other items would require tightening with respect to temperature in order to preclude an inadvertent loss of strategic coverage. As the United States expert further interpreted it, the final sentence of the United Kingdom technical paper (attached as Annex 2 to this document) appeared to support this point. With this qualification, the Group believed that this insertion would go a considerable way to meet the difficulties encountered in the application of Item 1560. Certain problems would remain, however, in the case of one or two classes of electronic components, e.g. resistors, capacitors, etc., and the Group felt that this question would have to be deferred until the forthcoming List Review. They had discussed possible solutions and believed that the best procedure would be to define such classes of components and list them as specific items. They would recommend that delegations study this possibility and submit their suggestions before the List Review. It was believed that, if this new procedure of defining specific classes of components were adopted, there would not be a very large number of cases warranting special listing. In conclusion, the Group did not think that this matter called for an urgent solution. They would recommend that delegations study the problem thoroughly in preparation for the List Review. As to the interpretation of the terms "electronic components" and "pièces détachées électroniques", there had been a considerable amount of discussion, which was recorded in detail in the Annex to this document.

3. The UNITED STATES Delegate thanked the Netherlands expert for his excellent summing up of the technical discussion. He believed that the Group had done useful work in emphasising the many factors and difficulties involved, and that the Committee might well recommend further study of the problem in the coming List Review.
4. The UNITED KINGDOM Delegate likewise thanked the Netherlands expert for his report. He regretted that United Kingdom experts had been unable to take part in the technical discussions, and noted that a paper setting out the United Kingdom Delegation's views had been handed to the Group of experts. (See Annex 2 hereto).
5. The GERMAN Delegate added his thanks to those of his United States and United Kingdom colleagues. He agreed that it would be difficult to settle the question of the interpretation of the word "components" at that time. He believed, however, that some solution would have to be found to the problem of coverage raised by the French Delegation. In the past, the German authorities had applied Item 1560 in its broader sense as covering electric components such as capacitors, resistors, etc., meeting the characteristics described therein. This appeared to be general Committee practice, and the German authorities were prepared to concur in it for the time being and would not at the present time insist upon the inclusion of the Note they had suggested. They hoped, however, that some attempt would be made during the List Review to exclude such general electric components. As to the particular problem of tubes and semi-conductors, there was a certain divergence of views as to whether or not they were covered by Item 1560, which might well lead to differing applications. The Delegate therefore felt that the Committee should reach some conclusion as to the addition of "n.e.s." to Item 1560 as suggested in the United Kingdom paper (Annex 2 hereto) and in his Delegation's Memorandum (COCOM Document 3715.60/1). He would be glad if the United States Delegation could consider this particular point separately from the general problem, so that a solution could be found in the near future.
6. The ITALIAN Delegate stated that he fully subscribed to his German colleague's suggestion and was ready to agree to the inclusion of "n.e.s."
7. The BELGIAN Delegate stated that he could agree to the addition of "n.e.s." He had no instructions, however, on the Note proposed by the German Delegation in COCOM Document 3715.60/1.
8. The FRENCH Delegate stated that he too was able to support the abovementioned addition. With respect to the proposed German Note, his Delegation were unable to accept it, and maintained the view they had previously expressed to the effect that tubes and semi-conductors were not covered by Item 1560.
9. The GERMAN Delegate, replying to his French colleague, explained that the addition of "n.e.s." to Item 1560 would mean that the latter did not cover electric or electronic components specifically mentioned elsewhere in the Electronics Category. Had the temperature range indicated in Item 1560 been an important factor for such components it would have been included in the appropriate item. All other electronic components should be regarded as covered by Item 1560 if they met the characteristics described therein. If therefore there were tubes and semi-conductors not elsewhere mentioned and capable of operating at the temperatures indicated, they should fall under the terms of Item 1560.
10. The UNITED STATES Delegate stated that he could not agree that the question of adding "n.e.s." could be studied separately from the general problem. Before deciding upon this addition, it would be necessary to examine the effects of such action on other items in the Electronics Category. This point had moreover been discussed in the technical meeting, when it had been felt that the question needed careful consideration because of possible unforeseen consequences. He noted that the final sentence of the United Kingdom technical paper (Annex 2 hereto) appeared to make the same point. The Delegate reminded

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the Committee that the addition of "n.e.s." had been discussed and intentionally discarded during the 1958 List Review. It was most important to see first if components specially protected by Item 1560 might not need additional protection should the suggested change be made. In this connexion, the Delegate cited as one example pulse transformers (Item 1514) for which no temperature limit was indicated in the specific definition. The problem did not arise in the case of tubes and semi-conductors since they were adequately protected at the present state of the art by Items 1544, 1545 and 1558. In conclusion the Delegate noted that there was no general agreement in the Committee on the meaning of the word "components". Before modifying the definition, therefore, the Committee should first attempt to find a uniform interpretation of this term. The Delegate undertook, however, to report the suggestions made and the views expressed to his Government.

11. A lengthy exchange of views ensued, during which the GERMAN Delegate explained that his Delegation could not agree to the principle of a general purpose item covering equipment already caught under specific items. The UNITED KINGDOM Delegate fully subscribed to this view and noted that the scope of Item 1560 was strictly limited to components fulfilling the characteristics described therein. The UNITED STATES Delegate was unable to concur in the view of the German and United Kingdom Delegations and referred the Committee to his remarks in this connexion in paragraph 4 of COCOM Document 3715.44/7.

12. The CHAIRMAN noted that, with the exception of the Japanese Delegate who had not expressed views, and the United States Delegate who had undertaken to refer the matter to his Government, there was general agreement to add the words "n.e.s." after "electronic components" in Item 1560. It was agreed that these two Delegations should attempt to obtain further views by the 25th July. It was further agreed to recommend that delegations submit proposals with a view to defining certain classes of components, as suggested by the Group of experts and recorded in paragraph 2 above, in preparation for the List Review in the autumn.

13. On the 11th July, the JAPANESE Delegate stated that he had been instructed to agree to the inclusion of the words "n.e.s." in Item 1560.

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ANNEX 1 to
COCOM Document 3715.44/8REPORT ON DISCUSSIONS OF WORKING GROUP- ITEMS 1560, 1544, ETC. -7th July, 1960Present: France, Germany, Netherlands, United States.

1. The Group, under the Chairmanship of the Netherlands expert, referred to the various Memoranda and records of discussions contained in COCOM Documents 3715.44/4, 5, 6 and 7 and 3715.60/1, and previous documents, as well as the United Kingdom survey of the situation (See Annex 2).
2. As regards the meaning of the words "electronic components" (as used in the definition of Item 1560) the United States expert remarked that in the United States this term covered both passive and active devices. This interpretation conformed to the definition of the word components given in the United Kingdom paper. Also in the Netherlands the term electronic components comprised both active and passive devices. The Netherlands expert gave some further explanation of the meaning of this term by means of a list of various terms used in the electronics industry, showing their inter-relationship. The German expert pointed out that in Germany normally only active devices were understood to be electronic components. The French expert, however, explained that the term "pièces détachées" on the contrary did not comprise tubes, transistors, and the like. According to the Netherlands expert the French term "pièces détachées" did not correspond to the English term "components".
3. The French, German and Netherlands experts could agree upon the insertion of the expression "n.e.s." as proposed by the German and United Kingdom Delegations. The United States expert found the inclusion of "n.e.s." reasonable and justifiable, if concurrently all items in fact specified elsewhere were examined and appropriately modified. He was of course speaking personally and the United States Delegation would not formally concur without official instructions.
4. As regards the exception of certain classes of components (such as resistors, capacitors, etc.) from Item 1560, the experts came to the conclusion that if and when a certain class of components were excluded it should immediately be defined and listed as a separate item. Resistors were certainly a class of components which needed a separate definition, because the criteria contained in Item 1560 were too broad and not sufficiently exacting. The French expert pointed out that other technical characteristics, such as for instance the precision or temperature coefficient, but generally-speaking chemical, physical, mechanical and electrical characteristics should be described together and in relation to the dimensions of the component in question in order to define a fair technical limit. As this was not, however, an easy task it seemed advisable to leave the problem over for the annual List Review.
5. It was commonly agreed that the present situation was not so urgent as to call for an immediate redefinition and, with the exception of the United States expert, the Group felt that the insertion of the words "n.e.s." could be agreed upon in order to take care of the majority of the difficulties experienced with the present definition.
6. The Netherlands expert remarked that according to his opinion resistors needed a redefinition because the heat resistance in this case was not the proper characteristic to distinguish between special and common resistors. On the other hand he considered that in general the heat resistance characteristic could still serve as a useful criterion for transformers, coils and fixed and variable capacitors. The Group generally-speaking could agree with this finding.
7. The Group finally recommended that all member countries should be requested to study separate and more precise definitions for certain classes of components (in particular resistors and capacitors) which were not satisfactorily defined by Item 1560 and therefore needed an individual definition. It was felt that for the time being this would only be required for one or two categories of components.

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ANNEX 2 to
COCOM Document 3715.44/8NOTE BY THE UNITED KINGDOM EXPERTTHE INTERPRETATION OF ITEMS 1544 AND 1560COMPONENTS

It is necessary first to define "components".

In the United Kingdom view, this term must be understood to comprise all the individual devices whether passive electrical e.g. capacitors, resistors, inductors, etc., electro-mechanical e.g. switches, relays, connectors etc., or semi-conductor or thermionic devices e.g. diodes, transistors, valves etc.

In the International List are a number of definitions, which apply to components as defined: - Items 1537, 1541, 1544, 1545, 1548, 1549, 1550, 1555, 1558, 1559, 1560, 1562, 1587. Some of these define components which, from the practical point of view, do not by their nature comply, nor are they required to comply, with the conditions laid down in Item 1560. These are Items 1537 (Waveguide components), 1541 (Cathode Ray Tubes), 1548 (Photocells), 1549 (Photomultiplier Tubes), 1550 (Thermal Detective Cells), 1555 (Image Converter Tubes etc.). There is also definition Item 1562 which embargoes tantalum capacitors designed for temperatures greater than 85°C. and Item 1587 which embargoes all radio grade quartz crystals. These two definitions are self-sufficient and are unaffected by Item 1560.

The remaining items deal with semi-conductor and thermionic devices. The Netherlands Delegation has already drawn attention to the fact that Silicon devices specifically freed by Item 1544 might be caught by Item 1560. So far as Item 1545 is concerned, all silicon transistors are embargoed; therefore there is no present discrepancy between Items 1545 and 1560. Under Item 1558, all valves designed for operation at temperatures greater than 100°C. are embargoed. Item 1558 therefore needs no support from 1560. Considering Item 1559, United Kingdom industry has no thyratrons developed specially for use at temperature ranges greater than -45°C. to +100°C. and knows of none. There seems to be no conflict here with Item 1560.

It is the United Kingdom view that Item 1560 should apply to all components as it has been suggested they be defined. In practice, however, there is a number of independent definitions of some types of components. These definitions seem self-sufficient, and nothing would be lost from control if the suggestion to exclude semi-conductor and thermionic devices is adopted. However in order to clarify the situation as regards the interaction of Item 1560 with other definitions it would be preferable to insert in Item 1560 after "Electronic components" the words "not elsewhere specified". This would involve ensuring that where particular definitions are in existence they are held to be authoritative in their field.

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ANNEX 3 to
COCOM Document 3715.44/8MEMORANDUM BY THE NETHERLANDS EXPERTDEFINITION OF ELECTRONIC COMPONENTS IN THE INTERNATIONAL LIST

1. The List contains either specific components or specialised components belonging to certain equipments. These are summed up in Appendix I. From this list it may be seen that already now practically all important classes and types of components have been included. At the time that the Item 1560 was introduced it was agreed that a certain gap existed which left certain specialised components free (for instance capacitors, transformers) satisfying stringent military requirements in particular with regard to their resistance to extreme temperatures.
2. Experience with the revised List has shown that certain difficulties are caused by the fact that the definition of Item 1560 is in some respect too general and too broad. In the first place there are certain classes of components which by their very nature and without necessitating special measures already resist extreme temperatures in a range from -45°C. up to +100°C. (for instance resistors). Secondly a number of specific types of electronic components are already defined in detail in other items (such as semi-conductor diodes). In order to avoid dubious overlaps it is proposed to insert the term "not elsewhere specified" in the definition of Item 1560.
3. In order to give a better understanding of the expressions electronic component, units, sub-assemblies and so forth a survey is given in Appendix II of various expressions and their inter-relationship. This terminology is in the process of standardisation in the electronic industry in Holland. It distinguishes two categories of terms, i.e. a functional and a productional. For the purpose of defining articles to be trade-controlled the functional term of electronic components should be used and its meaning corresponds in the best way with the term electronic component in Item 1560. The survey, also, could be very useful as a guide for the interpretation of various items in the 1500 group, as regards the many other terms in normal use.

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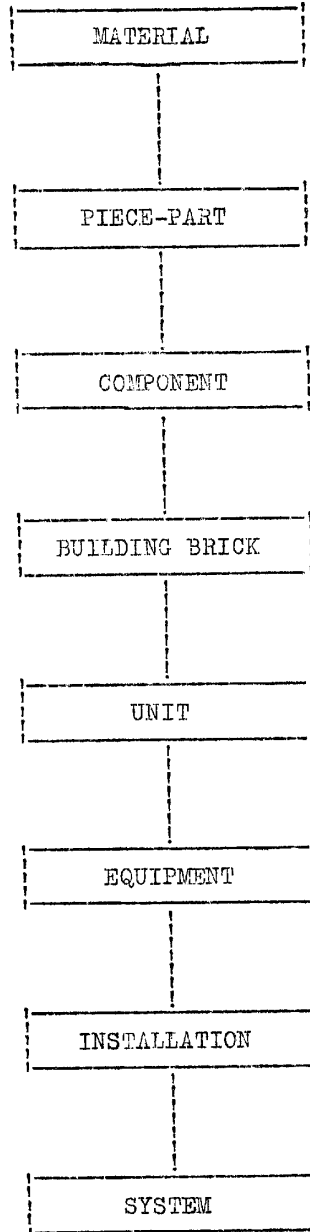
APPENDIX I to
ANNEX 3 to
COCOM Document 3715.44/8LIST OF VARIOUS COMPONENTS DEFINED IN THE INTERNATIONAL LIST *

<u>1485</u>	-	Gyro compasses, etc.
1501	-	Specialised parts and components
1502	-	Specialised parts
1503	-	Specialised sub-assemblies, parts
1507	-	Specialised parts
1510	-	Specialised components
<u>1514</u>	-	Pulse-transformer, pulse-forming equipment or delay lines being specialised parts of such modulators
1516	-	Specialised parts
1517	-	Components and sub-assemblies specially designed for use
1519	-	Specialised component parts
1520	-	Specialised components and sub-assemblies
1523	-	Specialised components, accessories and sub-assemblies
1533	-	Specialised components, accessories and parts
<u>1537</u>	-	Wave guides and components therefor
<u>1544</u>	-	Semi-conductor diodes
<u>1545</u>	-	Transistors
<u>1546</u>	-	Dendritic material
<u>1548</u>	-	Photo cells
<u>1549</u>	-	Photo multiplier cells
<u>1550</u>	-	Thermal detecting cells
<u>1553</u>	-	Flash-discharge X-ray tubes
<u>1555</u>	-	Image converters etc.
<u>1558</u>	-	Electronic valves
<u>1559</u>	-	Thyratrons, etc.
<u>1561</u>	-	Materials as absorbers of electromagnetic waves
<u>1562</u>	-	Tantalum capacitors
1564	-	Densely-built sub-assemblies
<u>1568</u>	-	Synchros, etc.
1571	-	Specialised parts
1572	-	Specialised recording media, parts and components
1584	-	Specialised parts
<u>1587</u>	-	Quartz crystals

* All items dealing specifically with components are underlined.

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APPENDIX II to
ANNEX 3 to
COCOM Document 3715.44/8LIST OF VARIOUS ELECTRONIC TERMS1. Survey of standard terminology and the relationship.2. Definition of terms.2.1. Component.

An elementary constructional part which can not normally be taken apart or repaired.

Examples: Resistor, capacitor, coil, core, insulator, electronic valve, transistor, potted assemblies, switch, tube holder.

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APPENDIX II to
ANNEX 3 to
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2.2. Building brick.

A group of components mounted as a whole, and capable of performing its function jointly with other components or building bricks.

Example: Memory matrix, and/or element, flip-flop.

2.3. Unit.

A group of parts or building bricks capable of independently performing a given function in an equipment.

Note: The notion "independent" is to be understood to mean: without considering input signals or supply voltages.

Examples: Tubes, intermediate-frequency amplifier, time-base generator.

2.4. Equipment.

An assembly of elements of lower order capable of operating independently and designed for a given use, but without the need of being limited thereto.

Examples: Radio-receiver, teleprinter, oscilloscope.

2.5. Installation

A combination of equipments, either interconnected or belonging together, having an input and/or an output for an electrical signal, without independently performing a function of a sociological nature.

Examples: Radar installation, broadcast studio installation, repeater station, Eurovision network.

2.6. System.

A combination of installations and/or equipments jointly performing a function of a sociological nature.

3. Definition of productional terms.

3.1. Material.

That which is started from in manufacturing the components or pieceparts.

3.2. Piecepart.

A basic element in the construction of electronic components.

Note: The word "piecepart" shall only be used in connection with the manufacturing process of those devices for which the parts are used.

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